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(54) Light emitting device

(57) An LED package and a method of fabricating the LED package utilize a prefabricated fluorescent member (52, 64) that contains a fluorescent material that can be separately tested for optical properties before assembly to ensure the proper performance of the LED package with respect to the color of the output light. The LED package includes one or more LED (22-28) dies that operate as the light source of the package. Preferably, the fluorescent material included in the prefabricated fluorescent member (52, 64) and the LED (22-28) dies of the LED package are selectively chosen, so that output light generated by the LED package duplicates natural white light. In a first embodiment of the invention, the prefabricated fluorescent member (52) is a substantially planar plate having a disk-like shape. In a second embodiment, the prefabricated fluorescent member (64) is a non-planar disk that conforms to and is attached to the inner surface of a concave lens (62). In this embodiment, the optical properties of the fluorescent member (64) are tested by examining an integrated unit formed by the concave lens (62) and the attached florescent member (64). In both embodiments, the LED package includes a layer (50) of encapsulant material that is deposited between the LED dies and the fluorescent member. In a preferred embodiment, the encapsulant material is an optical grade silicone gel, which has a high thermal stability and a desired refractive index for an efficient light extraction.

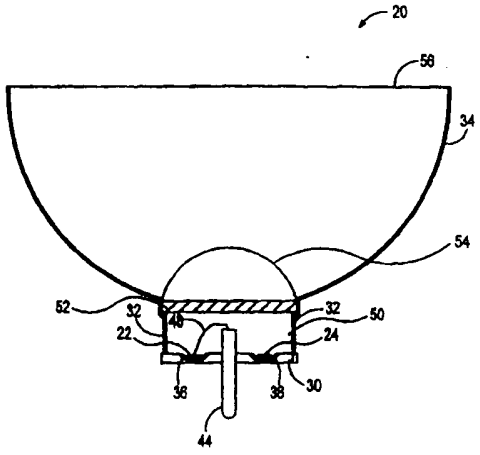

FIG. 2

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Application Number
EP 00 30 7565

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	17 January 2002	van der Linden, J.E.

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THE HAGUE	17 January 2002	van der Linden, J.E.

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